



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,042	04/05/2001	Norman S. Martucci	0153.00075	4862

7590

06/03/2005

Amy E. Rinaldo
KOHN & ASSOCIATES
Suite 410
30500 Northwestern Highway
Farmington Hills, MI 48334

EXAMINER

HOOK, JAMES F

ART UNIT

PAPER NUMBER

3754

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,042

Applicant(s)

MARTUCCI ET AL.

Examiner

James F. Hook

Art Unit

3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 7, it is dependent from claim 6 which specifies that the polymeric material is polyamide, and claim 7 redefines the same material to be fluorocarbon or polyamide. It is considered that if such were polyamide then claim 7 would fail to further limit claim 6 from which it depends, and if claim 7 were to be fluorocarbon, then such would be contradictory to the material set forth in claim 6 where a fluorocarbon is not a further limitation of a type of polyamide, thereby rendering the claim indefinite where the scope of the claim cannot be determined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 6-8, 16, 17, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Ozama. The patent to Ozama discloses the recited hose assembly and method of forming it comprising an inner layer 2 of a polymeric material where such is heat resistant and inherently would be chemical resistant, a reinforcement layer 3 made up of different fibers including aramid fibers (aromatic polyamides), where the outer

Art Unit: 3754

layer 4, which can be made of polyamides, can be extruded over and then embedded in the reinforcement layer, where the inner layer can also be extruded, where the hose is made of the materials which inherently would be capable of passing volumetric and whip tests especially when no limitations are made on the material to meet specific requirements of these tests, and such is an inherent property of the materials being used.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozama.

The patent to Ozama discloses in the examples that an adhesive can be provided, however, it is not clear such is needed when the remainder of the specification is silent on requiring an adhesive layer, and likewise there is no discussion of how the adhesive coating is administered. It is considered obvious that in light of the example of Ozama it is possible to provide an adhesive if necessary to hold the braided layer to the inner sleeve and it would have been obvious to one skilled in the art to use any method of applying that layer including dipping as such is a known method of applying adhesives, where such is merely a choice of mechanical expedients.

Claims 1, 2, 5-9, 13, 14, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Kutnyak. The patent to Powell discloses the recited

Art Unit: 3754

hose assembly and method of forming it comprising an inner layer 14 of PTFE a known fluorocarbon material and other materials, a reinforcement layer 30 made up of different fibers including aramid fibers, where the outer layer 40, which can be made of polyamides, of which nylon 6 is listed elsewhere as the types of polyamides used to make layers of the hose, can be extruded over and then embedded in the reinforcement layer, or other methods such as spray coating, dip coating, cross head or coextrusion, or spirally wrapped (col. 7, lines 42-56), and where an adhesive can be used with the fibers to adhere them to the hose, and where a layer of the hose can be provided with carbon black to make it electrically conductive, where the hose in Powell is made of the same types of materials set forth in applicants application which inherently would be capable of passing volumetric and whip tests especially when no limitations are made on the material to meet specific requirements of these tests, and such is an inherent property of the materials being used which would pass the same tests as applicants due to the same materials being used, where Powell lists the materials as being chemical resistant and inherently these materials also are resistant to heat degradation. The patent to Powell discloses all of the recited structure with the exception of using an adhesive layer to adhere the reinforcement to the inner and outer layers. The patent to Kutnyak discloses that it is old and known in the art to use either an adhesive to adhere a reinforcement ply to an inner layer or to use a material similar to the liner material which inherently would mean a plastic material, to adhere the reinforcement to the inner layer. It would have been obvious to one skilled in the art to modify the hose in Powell by reducing the number of steps required to form the hose by excluding the use of an

Art Unit: 3754

adhesive and substituting therefore another layer of polymeric material similar to the inner layer to create the hose, as suggested by Kutnyak where such would require fewer steps and would lower costs in production.

Claims 1-3, 5-7, 12-14, 16, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Horne. The patent to King discloses the recited hose assembly comprising a tubular first layer 12 made of a polymeric material resistant to chemical and heat degradation, which can be provided with carbon black 16 to dissipate electrical charge, a jacket layer 14 disposed about the inner layer, and at least one aramid fiber braided layer 13 disposed between the inner and jacket layers where the use of an aramid fiber layer will allow the layer to be "capable" of passing tests due to the inherent properties of the fibers being used, where glass fibers also can be used in combination with the aramid fibers, where the inner and jacket layers can be formed of a fluorocarbon material such as PTFE, and a coupling means 30 can be provided on the hose ends. The patent to King also states that the outer layer 14 holds the fabric layer in place, and that the layer adds abrasion resistance. Layer 14 is also described as a coating that coats the yarns, therefore it is considered to be a layer formed over the yarn layer. The patent to King discloses all of the recited structure with the exception of forming the outer layer by extruding it. The patent to Horne discloses the recited hose assembly comprising an inner layer 2, a reinforcement layer 3 made up of different fibers where the outer layer 4 can be extruded over and then embedded in the reinforcement layer. It would have been obvious to one skilled in the art to modify the outer layer of King by using an extrusion process to place the layer on the outside of

Art Unit: 3754

the reinforcement layer and then embed it into the reinforcement layer as suggested by Horne as such would be an easier process to use without requiring thinning of the polymer layer for application thereby reducing costs and smoothing the outer layer for aesthetic purposes.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Horne as applied to claims 1-3, 5-7, 12-14, 16, 17, and 19 above, and further in view of Nie. The patent to King as modified discloses all of the recited structure with the exception of forming the polymeric first layer of a polyketone. The patent to Nie discloses that inner tube layers 14 can be formed of polyketones when desired to meet the environmental needs of the hose to resist permeation of specific materials to be carried by the hose. It would have been obvious to one skilled in the art to modify the inner layer in King as modified to be formed of a polyketone material to meet environmental needs of the user, as polyketones have specific uses for materials being carried by the hose as suggested by Nie.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Horne as applied to claims 1-3, 5-7, 12-14, 16, 17, and 19 above, and further in view of Martucci (527). The patent to King as modified discloses all of the recited structure with the exception of forming the jacket of polyamide. The patent to Martucci discloses the recited hose assembly comprising an inner layer 12 provided with a carbon black strip 16, a reinforcement woven layer 26, where a jacket layer 14 can be extruded over the reinforcement and inner layers, and can be formed of polyamides including nylon 6 and others. It would have been obvious to one skilled in the art to modify the jacket layer in King as modified to form the outer layer of polyamides such as nylon 6 as such is a known material that is resistant to abrasion and damage as suggested by Martucci.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Horne as applied to claims 1-3, 5-7, 12-14, 16, 17, and 19 above, and further in view of Martucci (084). The patent to King as modified discloses all of the recited structure with the exception of forming the inner layer of expanded fluoropolymers. The patent to Martucci discloses the recited hose assembly comprising an inner layer 116 which can be formed of expanded or foamed fluoropolymers such as PTFE, where reinforcements 121 are provided over the foamed layer, and end couplings 130 are also provided. It would have been obvious to one skilled in the art to modify the inner layer of King as modified by forming the layer of a foamed material as such is known in the art to form the inner layer of a foamed fluoropolymer to allow for easier attachment of couplings at the end as suggested by Martucci.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Horne and Kutnyak. The patent to King discloses all of the recited structure with the exception of forming the outer layer by extruding it. The patent to Horne discloses the recited hose assembly comprising an inner layer 2, a reinforcement layer 3 made up of different fibers where the outer layer 4 can be extruded over and then embedded in the reinforcement layer. It would have been obvious to one skilled in the art to modify the outer layer of King by using an extrusion process to place the layer on the outside of the reinforcement layer and then embed it into the reinforcement layer as suggested by Horne as such would be an easier process to use without requiring thinning of the polymer layer for application thereby reducing costs and smoothing the outer layer for aesthetic purposes. The patent to King as modified discloses all of the recited method of forming the hose assembly with the exception of dipping the tube in an adhesive before putting the reinforcement aramid layer on the inner tube. The patent to Kutnyak discloses the recited method of forming a hose assembly comprising providing an inner layer 12, and dipping the layer in an adhesive before applying a reinforcement layer 13 over the inner layer to adhere the reinforcement to the inner tube. It would have been obvious to one skilled in the art to modify the method of forming the tube in King as modified by providing a step of dipping the inner tube in adhesive before applying the reinforcement layer to provide better connection of the reinforcement to the inner layer to prevent delamination as suggested by Kutnyak.

Claims 1-3, 5-9, 12-14, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Powell (988). The patent to King discloses the

Art Unit: 3754

recited hose assembly comprising a tubular first layer 12 made of a polymeric material resistant to chemical and heat degradation, which can be provided with carbon black 16 to dissipate electrical charge, a jacket layer 11 disposed about the inner layer, and at least one aramid fiber braided layer 13 disposed between the inner and jacket layers where the use of an aramid fiber layer will allow the layer to be "capable" of passing tests due to the inherent properties of the fibers being used, where glass fibers also can be used in combination with the aramid fibers, where the inner and jacket layers can be formed of a fluorocarbon material such as PTFE, and a coupling means 30 can be provided on the hose ends. The patent to King also states that the outer layer 14 holds the fabric layer in place, and that the layer adds abrasion resistance. Layer 14 is also described as a coating that coats the yarns, therefore it is considered to be a layer formed over the yarn layer. The patent to King discloses all of the recited structure with the exception of forming the outer layer by extruding it, forming the jacket of polyamide including nylon 6, and dipping the tube in an adhesive before putting the reinforcement aramid layer on the inner tube. The patent to Powell discloses the recited hose assembly comprising an inner layer 14 of PTFE and other materials, a reinforcement layer 30 made up of different fibers where the outer layer 40, which can be made of polyamides, of which nylon 6 is listed elsewhere as the types of polyamides used to make layers of the hose, can be extruded over and then embedded in the reinforcement layer, or other methods such as spray coating, dip coating, cross head or coextrusion, or spirally wrapped (col. 7, lines 42-56), and where an adhesive can be used with the fibers to adhere them to the hose. It would have been obvious to one skilled in the art

Art Unit: 3754

to modify the outer layer of King by using an extrusion process to place the layer on the outside of the reinforcement layer and then embed it into the reinforcement layer as suggested by Powell as such would be an easier process to use without requiring thinning of the polymer layer for application thereby reducing costs and smoothing the outer layer for aesthetic purposes, and such is an equivalent method used as suggested by Powell, to modify the outer layer to be made of polyamides such as nylon 6 as such is a known equivalent material used for protective jackets where such is a cheaper material, and to provide adhesive coating to adhere the fibers to the inner and outer layers to help prevent elongation as suggested by Powell where such would prevent premature failure thereby saving money.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Powell as applied to claims 1-3, 5-9, 12-14, and 16-19 above, and further in view of Nie. The patent to King as modified discloses all of the recited structure with the exception of forming the polymeric first layer of a polyketone. The patent to Nie discloses that inner tube layers 14 can be formed of polyketones when desired to meet the environmental needs of the hose to resist permeation of specific materials to be carried by the hose. It would have been obvious to one skilled in the art to modify the inner layer in King as modified to be formed of a polyketone material to meet environmental needs of the user, as polyketones have specific uses for materials being carried by the hose as suggested by Nie.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Powell as applied to claims 1-3, 5-9, 12-14, and 16-19 above, and

further in view of Martucci (084). The patent to King as modified discloses all of the recited structure with the exception of forming the inner layer of expanded fluoropolymers. The patent to Martucci discloses the recited hose assembly comprising an inner layer 116 which can be formed of expanded or foamed fluoropolymers such as PTFE, where reinforcements 121 are provided over the foamed layer, and end couplings 130 are also provided. It would have been obvious to one skilled in the art to modify the inner layer of King as modified by forming the layer of a foamed material as such is known in the art to form the inner layer of a foamed fluoropolymer to allow for easier attachment of couplings at the end as suggested by Martucci.

Response to Arguments

Applicant's arguments filed April 22, 2005 have been fully considered but they are not persuasive. With respect to Powell under 35 USC 102(e) such is moot in view of the new rejection above. With respect to the argument directed toward King in view of Powell, King does not mention anywhere that the examiner can find any discussion of requiring a tie layer in addition to the outer layer 14 to hold the braided layer to the inner hose therefore such meets the claim language with the exception of how the outer layer is formed which is taught by the modifying reference to Powell. If applicant still feels King teaches an additional layer then such should be pointed out in the reference to King with specific line numbers in any subsequent response. Powell is merely being used to modify the method in which the outer layer is applied and therefore any other arguments are not persuasive. With respect to King in view of Horne, the same is true,

Art Unit: 3754

the coating 14 in King is considered the outer layer as described above it meets the limitations of the claims in all manner except how it is applied which the modifying reference to Horne teaches. It is immaterial any additional function or manner in which this outer layer attaches to or holds the reinforcement layer on when such is not claim language currently found in the claims under this rejection, therefore the arguments are more detailed than the claim language. King clearly states in column 5, lines 40-47 that the coating 14 hinders abrasion which suggests that such is there to protect the hose assembly including the reinforcement and inner layer which lie within it. Horne is made up of fibers which can be considered as aramid-like in that such would include any reinforcement similar to aramid, however, it is also noted that Horne is not being used to modify the reinforcement, only the manner in which the outer layer is applied, any other argument is moot in that it is not pertaining to the modification being made when Horne teaches providing a coating layer by extrusion over a reinforcement layer. The patent to King discloses the same layer for reinforcement as applicant, a mixture of glass and aramid fibers or just aramid fibers, no modification is needed for this structure. With respect to Nie such is being used to merely teach the equivalent uses of different plastics for different layers and is not being used to teach any other feature therefore any argument as to the lack of Nie of teaching other structure not being relied upon for the combination is not persuasive. With respect to the Martucci references, such are being used to modify the type of polymer used for the outer layer, and expanding the material of the inner layer, any argument discussing shortcomings of the teachings of the two Martucci patents with respect to any other structure is not persuasive when

Art Unit: 3754

such are merely being used to modify the materials and their properties of the inner and outer layers. With respect to the Kutnyak rejection, such is not a persuasive argument when the patent to Horne provides the teaching and modification of King to include extruding the outer layer, Kutnyak is merely being used to teach the additional use of an adhesive layer which is not found in King, any argument directed toward Kutnyak not teaching other structure already covered by other references is not persuasive. The rejection above has been clarified to make that point clear.

Conclusion

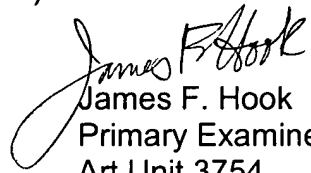
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Sato, Head, and Ramey disclosing state of the art hoses.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (571) 272-4906. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James F. Hook
Primary Examiner
Art Unit 3754

JFH